## Listing of Claims

1. (Currently Amended) An inspection system for detecting defects on a sample, the inspection system comprising:

an optical subsystem configured to collect ultra violet light emanating from the sample, the optical subsystem including an optical component having an ~~exposed~~ optical surface;

a detector configured to receive the collected light from the optical subsystem and to generate an image of at least a portion of the sample with the received light;

an analyzer configured to determine whether there are any defects present on the portion of the sample by analyzing the image generated by the detector; and

~~a mechanism configured to protect the exposed optical surface of the optical component of the optical subsystem from contaminants that are capable of adversely effecting the optical quality of the optical component~~

a gas purge system configured to produce a gas stream that blocks contaminants from reaching the optical surface of the optical component and that transports the contaminants away from the optical surface of the optical component, the gas purge system including a substantially planar cover having an opening disposed in front of and along an optical axis of the optical component, the opening allowing light to pass for the purpose of inspecting the optical surface of the optical component, and the gas stream to pass for the purpose of preventing contaminants from reaching the optical surface of the optical component.

2. Cancelled.

3. Cancelled.

4. (Currently Amended) The system as recited in claim [3] 1 wherein the gas stream flows parallel to the optical component before traveling through the opening.

5. (Currently Amended) The system as recited in claim [2] 1 wherein the gas stream is symmetrically distributed through the opening.

6. (Currently Amended) The system as recited in claim [2] 1 wherein the gas stream is asymmetrically distributed through the opening.

7. Cancelled.

8. Cancelled.

9. (Currently Amended) The system as recited in claim [2] 1 ~~wherein the mechanism~~ further comprising ~~includes~~ a transparent cover that physically blocks contaminants from reaching the optical surface of the optical component.

10. (Original) The system as recited in claim 9 wherein the transparent cover includes an optical membrane and a frame

11. (Original) The system as recited in claim 10 wherein the optical membrane is disposed between the sample and the optical component

12. (Original) The system as recited in claim 1 wherein the sample is associated with semiconductor manufacturing.

13. (Original) The system as recited in claim 12 wherein the sample is a reticle, mask or wafer.

14. (Original) The system as recited in claim 1 wherein the optical component is a lens.

15. (Original) The system as recited in claim 1 wherein the contaminants correspond to hydrocarbons, inorganics or moisture.

16. (Currently Amended) A gas flow system ~~capable of being used in~~ for an optical inspection system, the gas flow system comprising:

a means for flowing a gas stream in front of an exposed optical surface of the optical inspection system so as to prevent contaminants from adversely effecting the exposed optical surface of the optical inspection system.

17. (Original) The system as recited in claim 16 wherein the optical surface is associated with a lens capable of directing UV light.

18. (Original) The system as recited in claim 16 wherein flowing a gas stream in front of the exposed optical surface effectively removes the contaminants in a region proximate the exposed optical surface.

19. (Original) The system as recited in claim 16 wherein the gas stream is routed across the exposed optical surface substantially transverse to the optical axis of the exposed optical surface.

20. (Original) The system as recited in claim 16 wherein the gas stream is routed away from the exposed optical surface substantially parallel to the optical axis of the optical surface.

21. (Original) A system for inspecting substrates, comprising:

an optical subsystem having a front lens; and

a cover disposed between the front lens and the substrate to be inspected, the cover having an opening that allows ultra violet light to pass between the front lens and the substrate to be inspected, the cover defining at least in part a channel within in which a gas stream is created for the purpose of preventing particles from depositing on the front lens.

22. (Currently Amended) ~~In a system comprising a lens and a semiconductor substrate, a~~ A method of ~~processing the~~ inspecting a semiconductor substrate, comprising:

~~disposing the~~ providing a front collection lens along an optical path, the front collection lens being the first optical component in a series of optical components along the optical path;

exposing the semiconductor substrate to UV radiation~~, wherein the light propagates through the lens along the optical path~~; ~~and~~

generating a gas stream that blocks contaminants from reaching the surface of the front collection lens and that transports contaminants away from the surface of the front collection lens during at least said exposing;

collecting light emanating from the sample with the front collection lens; and

analyzing the collected light to determine if defects are present in the semiconductor substrate.

~~disposing a transparent cover proximately to the lens to protect the lens from contamination.~~

23. (Currently Amended) An optical inspection system for ~~processing~~ inspecting a semiconductor surface for defects or other abnormalities thereof, comprising:

an optical subsystem configured to collect light emanating from the semiconductor surface and to direct the collected light to a detector, the optical subsystem including a series of optical components [a lens] disposed along an optical path, the series of optical components including a front collection lens that is the optical component closest to the semiconductor surface; and

a transparent cover disposed proximately to the front collection lens between the front collection lens and the semiconductor surface to protect the front collection lens from contamination.

24. (New) The system as recited in claim 21 wherein the channel creates a lateral gas stream that travels across the optical axis of the front lens.

25. (New) The system as recited in claim 24 wherein the cover includes a first channel and a second channel, the first channel being recessed in a top surface of the cover, the second channel being recessed in a bottom surface of the cover, the first channel being located on one side of the opening, the second channel being located on the other side of the opening, an end of the first channel aligning with the a beginning of the second channel, the gas stream flowing through and across the opening between the end of the first channel and the beginning of the second channel.

26. (New) The system as recited in claim 24 wherein the cover includes a top surface and a bottom surface, the top surface including a collection recess for collecting a purge gas flowing around the optical subsystem and a direction recess for directing the collected gas to the opening, the bottom surface including an exit recess for collecting the gas passing though the opening and for directing the gas to an exhaust area outside the periphery of the front lens, the exit recess being located directly across from the direction recess, the gas stream flowing through and across the opening from the top surface to the bottom surface between the direction recess on the top surface and the exit recess on the bottom surface.

27. (New) The system as recited in claim 26 wherein the depth of the collection recess and direction recess is smaller than the depth of the exit recess.

28. (New) The system as recited in claim 26 wherein the distance between the top surface and the front lens is smaller than the distance between the bottom surface and the substrate.

29. (New) The system as recited in claim 26 wherein the collection recess includes a feeding portion and a capturing portion, the capturing portion is configured to collect gas and the feeding portion is configured to feed the captured gas to the direction recess.

30. (New) The system as recited in claim 26 wherein the capturing portion forms a semi annular channel along the periphery of the cover, and the feeding portion forms a flared channel connecting the capturing portion to the direction recess.

31. (New) The gas flow system as recited in claim 16 wherein the optical inspection system includes an optical subsystem having a plurality of optical components aligned along an optical axis, the optical components cooperating to collect light emanating from a sample and to direct the collected light to a detector for the purpose of defect analysis, and wherein the exposed optical surface is from at least one of the optical components of the optical inspection system

32. (New) The gas flow system as recited in claim 31 wherein the gas stream flows at least in part parallel to the exposed surface.

33. (New) The inspection system as recited in claim 1 wherein the planar cover is spaced apart from the optical surface of the optical component along the optical axis such that a gas conduit is created between the cover and the optical surface of the optical component, the gas stream flowing through the gas conduit and through the opening in the cover.

34. (New) The inspection system as recited in claim 1 wherein the optical subsystem is disposed inside a housing, and wherein the gas purging system includes a gas source that supplies gas into the housing thereby forming the gas stream, the planar cover cooperating with the housing to enclose the optical subsystem such that the gas stream exits through the opening in the planar cover.

35. (New) The inspection system as recited in claim 1 wherein the optical component is a front collection lens that is the optical component of the optical subsystem that is closest to the sample to be inspected.

36. (New) The inspection system as recited in claim 35 wherein the planar cover is spaced apart from the optical surface of the front collection lens along the optical axis such that a first

gas conduit is created between the cover and the optical surface of the front collection lens, wherein the planar cover is spaced apart from the surface of the sample to be inspected along the optical axis such that a second gas conduit is created between the planar cover and the surface of the sample to be inspected, and wherein the gas stream flows through the first conduit to the opening and from the opening through the second conduit.

37. (New) The inspection system as recited in claim 36 further comprising a transparent cover disposed along the optical axis between the planar cover and the sample to be inspected, the second conduit being created between the planar cover and the transparent cover.

38. (New) The inspection system as recited in claim 35 further comprising a transparent cover disposed along the optical axis between the front collection lens and the planar cover, the planar cover being spaced apart from the transparent cover along the optical axis such that a first gas conduit is created between the planar cover and the transparent cover, wherein the planar cover is spaced apart from the surface of the sample to be inspected along the optical axis such that a second gas conduit is created between the planar cover and the surface of the sample to be inspected, and wherein the gas stream flows through the first conduit to the opening and from the opening through the second conduit.